UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/637,219	08/08/2003	Benoit Maison	YOR920030225US1	3318

35526 7590 02/13/2007 DUKE. W. YEE YEE & ASSOCIATES, P.C. P.O. BOX 802333 DALLAS, TX 75380	**EXAMINER** NEWAY, SAMUEL G

ART UNIT	PAPER NUMBER
2626	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	02/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

PTOL-90A (Rev. 10/06)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED .(35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 August 2003</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 August 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some *   c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This is responsive to the Application filed on July 8, 2003.

Drawings

2.   The drawings are objected to because in FIG. 4, the horizontal arrow leading

from item 414 is believed to be an error . Corrected drawing sheets in compliance with

37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several

views of the drawings for consistency. Additional replacement sheets may be necessary

to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

Claim Objections

3.   Claim 17 is objected to because of the following informalities: it is believed the

phrase "the method comprising" on the first line should read "the apparatus comprising"

and will be treated as such. Appropriate correction is required.

4.   Claim 20 is objected to because of the following informalities: it is believed the

phrase "a profile[r], wherein the profiler" is a typographical error. Appropriate correction

is required.

Claim Rejections - 35 USC § 101

5.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
> matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
> conditions and requirements of this title.

6.   Claims 11 – 20 are rejected under 35 U.S.C. 101 because the claimed invention

is directed to non-statutory subject matter.

. Claims 11 – 16 are directed to a "computer program product, in a computer

readable medium".

The "computer readable medium", in accordance with Applicant's specification,

may be an electromagnetic signal. This subject matter is not limited to that which falls

within a statutory category of invention because it is not limited to a process, a machine,

a manufacture, or a composition of matter. Instead, it includes a form of energy, which

does not fall within a statutory category. Amending the claims to recite – recordable type

media - would overcome this rejection in a manner consistent with Applicant's

specification.

Also, the "computer program product" can reasonably be interpreted as computer listings only. Computer programs claimed as computer listings per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory

Claims 17 – 20 are directed to an "apparatus". However, it appears that the apparatus would reasonably be interpreted by one of ordinary skill in the art as software (computer program), per se. The only elements recited as part of the apparatus, "code generator" and "compiler", are not explicitly and deliberately defined in the specification as hardware.

Claim Rejections - 35 USC § 102

7.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the

applicant for patent, except that an international application filed under the treaty defined in section
351(a) shall have the effects for purposes of this subsection of an application filed in the United States
only if the international application designated the United States and was published under Article 21(2)
of such treaty in the English language.

8.   Claims 1 – 4, 6, and 11 – 13 are rejected under 35 U.S.C. 102(e) as being

anticipated by Arnold et al. (USPGPub 2003/0125955).

Claim 1:

Arnold discloses a method for generating task-specific code for pattern

recognition ([0008]), the method comprising:

receiving task-specific input system data of a pattern recognition system and

generating task-specific code for the pattern recognition system based on the task-

specific input system data ("the distributed speech recognition system allows automatic

"speaker adaptation" to be performed locally by the client device ... local parameters ...

are adapted locally by the client device in performing its speech recognition function",

[0008], see also [0009] and "the client device is adapting its models in response to the

speaker", [0020]);

Claim 2:

Arnold discloses the method of claim 1, wherein the pattern recognition system

performs speech recognition ("parameters ... are adapted locally by the client device in

performing its speech recognition functions", [0008]).

Claim 3:

Arnold discloses the method of claim 2, wherein the task-specific input system

data includes one of a language model, an acoustic model, a front-end for computing

feature vectors, and information related to speaker adaptation (FIG. 1, items 120 – 124

and related text).

Claim 4:

Arnold discloses the method of claim 3, wherein the acoustic model includes

Gaussians ([0023]).

Claim 6:

Arnold discloses the method of claim 3, wherein the acoustic model is

represented as a Hidden Markov Model ([0023]).

Claims 11 – 13 are similar in scope and content to claims 1 – 3 and are rejected

with the same rationale.

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

10.   Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et

al. (USPGPub 2003/0125955) in view of ("Determining the Probability of Words in a

String With a Word-Skipping Model ", IBM Technical Disclosure Bulletin, November

1985).

Claim 5:

Arnold discloses the method of claim 3, but does not disclose wherein the language model is represented as a Hidden Markov Model ([0023]).

The IBM Technical Disclosure Bulletin discloses a speech recognition method where the language model is "defined as a Markov source (a hidden Markov chain)" (page 2, lines 11-13).

Therefore it would have been obvious to one with ordinary skill in the art at the time of the invention to represent the language model as a Hidden Markov Model in Arnold's method because off the shelf Hidden Markov Model software was available therefore freeing Arnold from programming another model.

11.   Claims 7, 14, and 17 – 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al. (USPGPub 2003/0125955) in view of Poirier et al (USPN 6,321,372).

Claim 7:

Arnold discloses the method of claim 1, but does not explicitly disclose compiling the task-specific code to form a decoder program.

Poirier discloses a similar method where a source code is modified, such as by further specifying it, in a linguistic service system. Poirier also discloses the code being compiled ("compile ... modified source code", col. 10, lines 52-56).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to compile a source code in order to obtain an executable file which is able to run on a computer (Poirier, "compile ... modified source code to obtain service executable", col. 10, lines 52-56).

Claim 14 is similar in scope and content to claim 7 and is rejected with the same rationale.

Claim 17 is similar in scope and content to claim 7 and is rejected with the same rationale.

Claim 18:

Arnold and Poirier disclose the apparatus of claim 17; Arnold further discloses wherein the pattern recognition system performs speech recognition ("parameters ... are adapted locally by the client device in performing its speech recognition functions", [0008]).

Claim 19:

Arnold and Poirier disclose the apparatus of claim 18, Arnold further discloses wherein the task-specific input system data includes one of a language model, an acoustic model, a front-end for computing feature vectors, and information related to speaker adaptation (FIG. 1, items 120 – 124 and related text).

12.   Claims 8 – 10, 15 – 16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arnold et al. (USPGPub 2003/0125955) in view of Poirier et al (USPN 6,321,372) and in further view Lanning (USPN 5,787,285).

Claim 8:

Arnold and Poirier disclose the method of claim 7, but they do not explicitly disclose profiling the decoder program to form a profile and determining whether the decoder program is optimized.

Lanning discloses a method of optimizing executable software where the code is profiled and optimized ("automated "profilers" to provide data to these optimizing compilers", col. 1, lines 42-52).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to profile and optimize the code in Arnold and Poirier's method in order to "enhance the run-time performance of a piece of software"(Lanning, col. 1, lines 42-52).

Claim 9:

Arnold, Poirier and Lanning disclose the method of claim 8, Arnold and Poirier do not explicitly disclose wherein responsive to the decoder program not being optimized, automatically modifying and recompiling the decoder program based on the profile.

Lanning discloses automatically modifying and recompiling the code ("The optimizing compiler then uses the information gathered by the profiler to recompile the source code ", col. 1, lines 42-52).

It would have been obvious to one with ordinary skill in the art at the time the invention was made to modify and recompile the code in Arnold and Poirier's method in order to "enhance the run-time performance of a piece of software"(Lanning, col. 1, lines 42-52).

Claim 10:

Arnold and Poirier disclose the method of claim 7, but they do not disclose compiling the code in several parts corresponding to several modules of the pattern recognition system and assembling the compiled code before execution.

Lanning discloses compiling the code in several parts as claimed in the instant

claims ("provide executable code optimized for use with a plurality of operational

environments or modes ...", col. 2, lines 42-45).

It would have been obvious to one with ordinary skill in the art at the time the

invention was made to compile the code in several parts because this "reduces the

execution time of the code associated with that environment or mode" (Lanning, col. 3,

lines 51-55).

Claims 15 – 16, and 20 are similar in scope and content to claims 8 – 9 and are

rejected with the same rationale.

Conclusion

The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

Stanley et al. (USPN 5,684,924) discloses a speech recognition system

comprising a core program and a plurality of utility program modules for adjusting

various recognition parameters.

Preston et al. (USPGPub 2003/0046061) discloses a method of automatically

generating software from one or more predefined functions in accordance with an

input statement entered in natural language.

13.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Samuel G. Neway whose telephone number is 571-270-

1058. The examiner can normally be reached on Monday - Friday 8:30AM - 5:30PM

EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, David R Hudspeth can be reached on 571-272-7843. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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